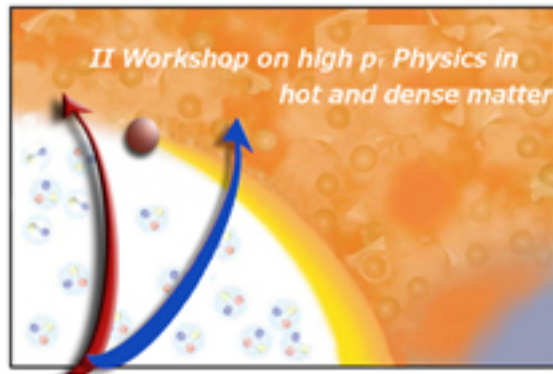


# 2nd Workshop on High $p_T$ Physics in Hot and Dense Matter



## Report of Contributions

Contribution ID: 0

Type: **not specified**

## **A novel approach to jet quenching measurements at RHIC and LHC**

The interaction of QCD jets with hot and dense colored matter ("jet quenching") has provided unique experimental probes of the Quark Gluon Plasma, at both RHIC and LHC. However, the full power of jet quenching has yet to be harnessed, because of the difficulty to reconstruct complete jets in the complex environment of high energy nuclear collisions. In this talk I will present a novel experimental approach to jet quenching which enables the first truly infrared and collinear-safe jet reconstruction in heavy ion collisions, and apply it to data from the ALICE experiment at the LHC and the STAR experiment at RHIC.

**Presenter:** JACOBS, Peter (Lawrence Berkeley National Laboratory)

Contribution ID: 1

Type: **not specified**

## **A novel approach to jet quenching measurements at RHIC and LHC**

*Friday, 25 July 2014 10:00 (45 minutes)*

The interaction of QCD jets with hot and dense colored matter ("jet quenching") has provided unique experimental probes of the Quark Gluon Plasma, at both RHIC and LHC. However, the full power of jet quenching has yet to be harnessed, because of the difficulty to reconstruct complete jets in the complex environment of high energy nuclear collisions. In this talk I will present a novel experimental approach to jet quenching which enables the first truly infrared and collinear-safe jet reconstruction in heavy ion collisions, and apply it to data from the ALICE experiment at the LHC and the STAR experiment at RHIC.

**Presenter:** JACOBS, Peter (Lawrence Berkeley National Laboratory)

**Session Classification:** Session I

Contribution ID: 2

Type: **not specified**

## **Measurement of jet production in central Pb-Pb collisions using semi-inclusive hadron-jet distributions**

*Friday, 25 July 2014 10:45 (45 minutes)*

**Presenter:** CUNQUEIRO MENDEZ, Leticia (LNF)

**Session Classification:** Session I

Contribution ID: 3

Type: **not specified**

## Energy conservation in high-pT reactions

*Friday, 25 July 2014 12:00 (45 minutes)*

The limitations related to energy conservation affect the space-time development of jets in vacuum and inside a medium, enhance jet/hadron attenuation. The rate of energy dissipation strongly affect hadronization of heavy flavors.

**Presenter:** Prof. KOPELIOVICH, Boris (UTFSM)

**Session Classification:** Sassion II

Contribution ID: 4

Type: **not specified**

## Prospects for heavy ions at HL-LHC and FCC

*Friday, 25 July 2014 14:30 (45 minutes)*

In the first part of the presentation I will review the long-term plans for the heavy-ion programme in the High-Luminosity phase of the LHC. The emphasis will be on the projected performance of the ALICE and CMS experiments for the measurement of rare probes of the Quark-Gluon Plasma. In the second part, I will introduce the Future Circular Collider study, which has as main goal a new hadron collider with a beam energy 7 times larger than the LHC. I will discuss the opportunities opened by a heavy-ion programme at this machine

**Presenter:** DAINESE, Andrea (PD)**Session Classification:** Session III

Contribution ID: 5

Type: **not specified**

## **Polarized Hyperons and Heavy Quarks Production at the LHC**

*Friday, 25 July 2014 15:15 (45 minutes)*

Longstanding questions in spin physics can be explored at the LHC.

This talk singles out two of these polarization phenomena, namely the occurrence of large hyperons polarization and top quarks spin correlations.

The measurement of hyperon polarization at LHC energies will provide a unique insight into the mechanisms underlying single spin asymmetries in QCD, whereas

top anti-top spin correlations will allow for a clean extraction of linear gluon polarization.

A description of these polarization phenomena at the LHC in terms of Generalized Parton Distributions and Fracture Functions will be presented.

**Presenter:** Dr LIUTI, simonetta (University of Virginia)

**Session Classification:** Session III